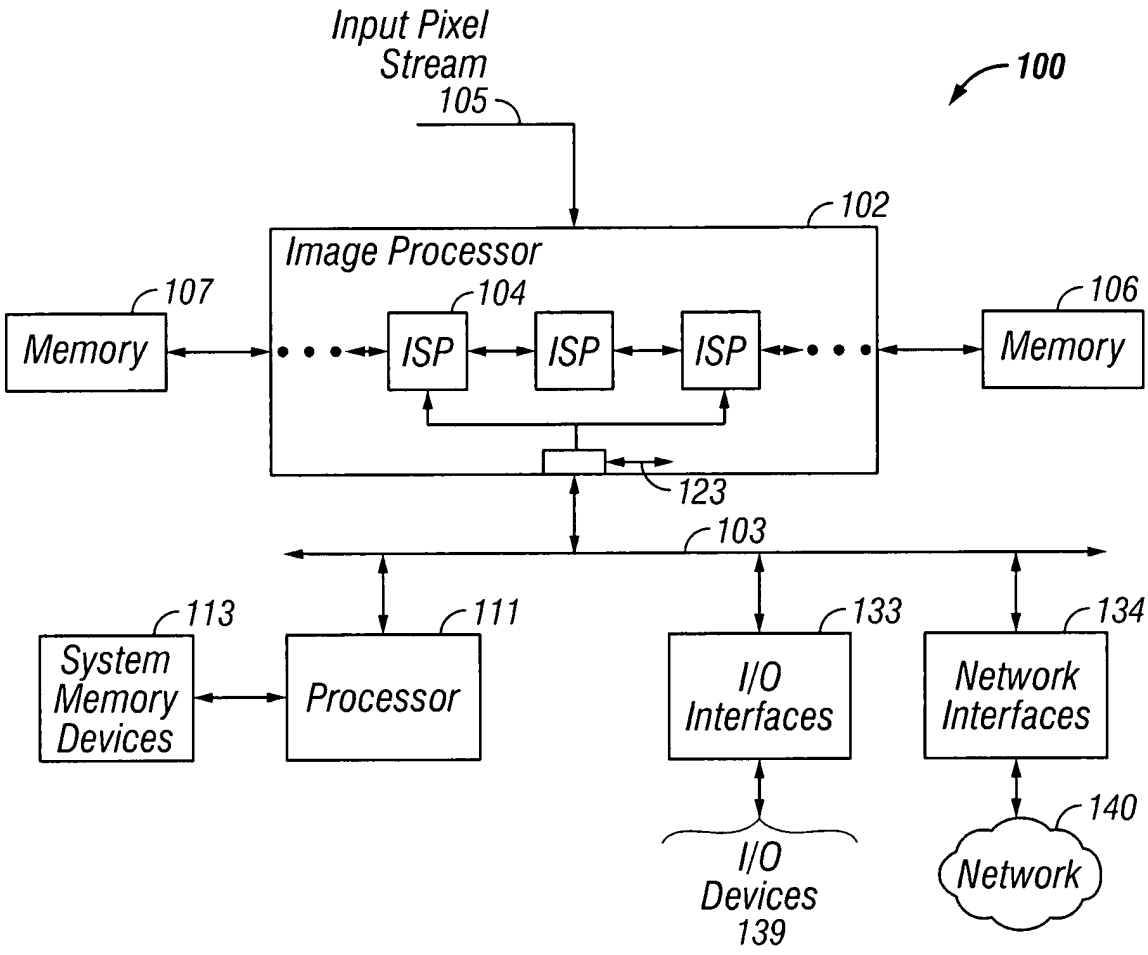

FIG. 1

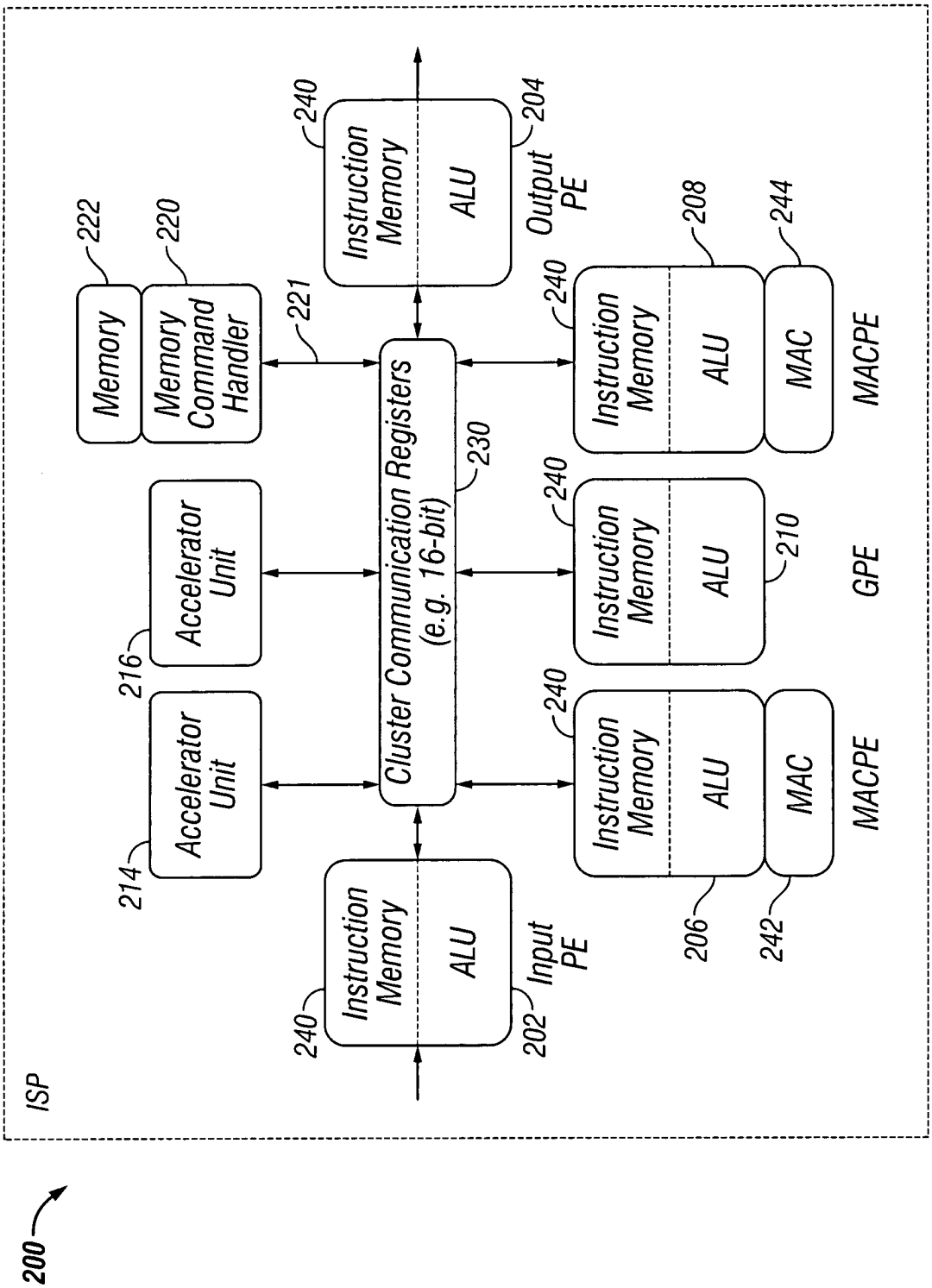
200
ISP
Memory
222
Memory Command Handler
220
221
Accelerator Unit
216
Accelerator Unit
214
Cluster Communication Registers (e.g. 16-bit)
230
Instruction Memory
ALU
240
Input PE
202
Instruction Memory
ALU
240
Output PE
204
Instruction Memory
ALU
MAC
240
208
244
MACPE
Instruction Memory
ALU
240
210
GPE
Instruction Memory
ALU
MAC
240
206
242
MACPE

FIG. 2

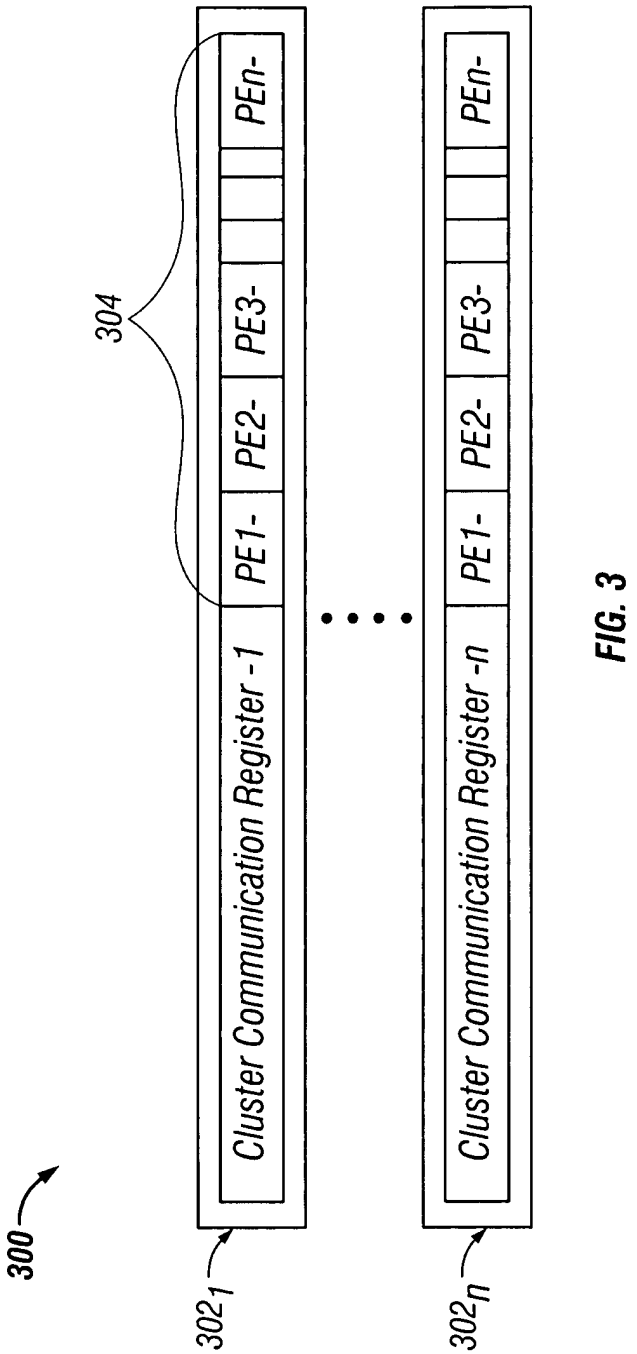
300
302 1
302 n
Cluster Communication Register -1
Cluster Communication Register -n
PE1-
PE2-
PE3-
PEn-
304

FIG. 3

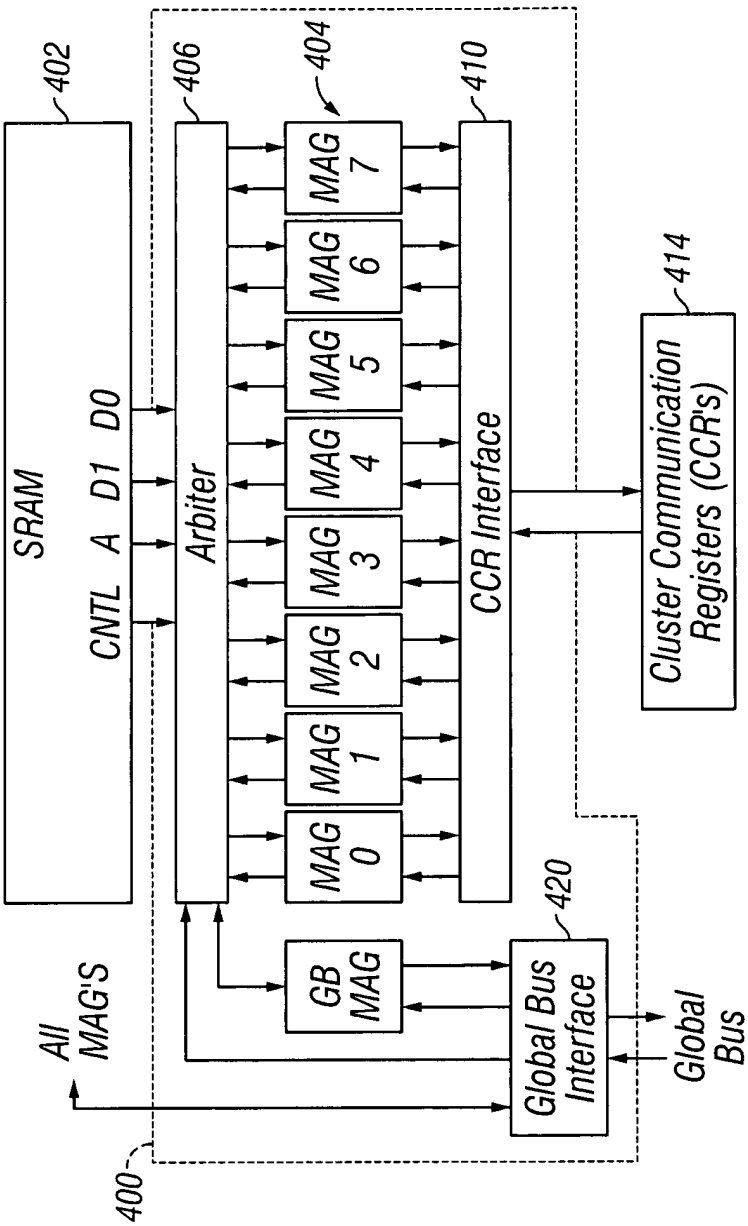
402
406
404
410
414
SRAM
CNTL A D1 D0
Arbiter
MAG 7
MAG 6
MAG 5
MAG 4
MAG 3
MAG 2
MAG 1
MAG 0
CCR Interface
Cluster Communication Registers (CCR's)
GB MAG
420
All MAG'S
Global Bus Interface
Global Bus 423
400

FIG. 4

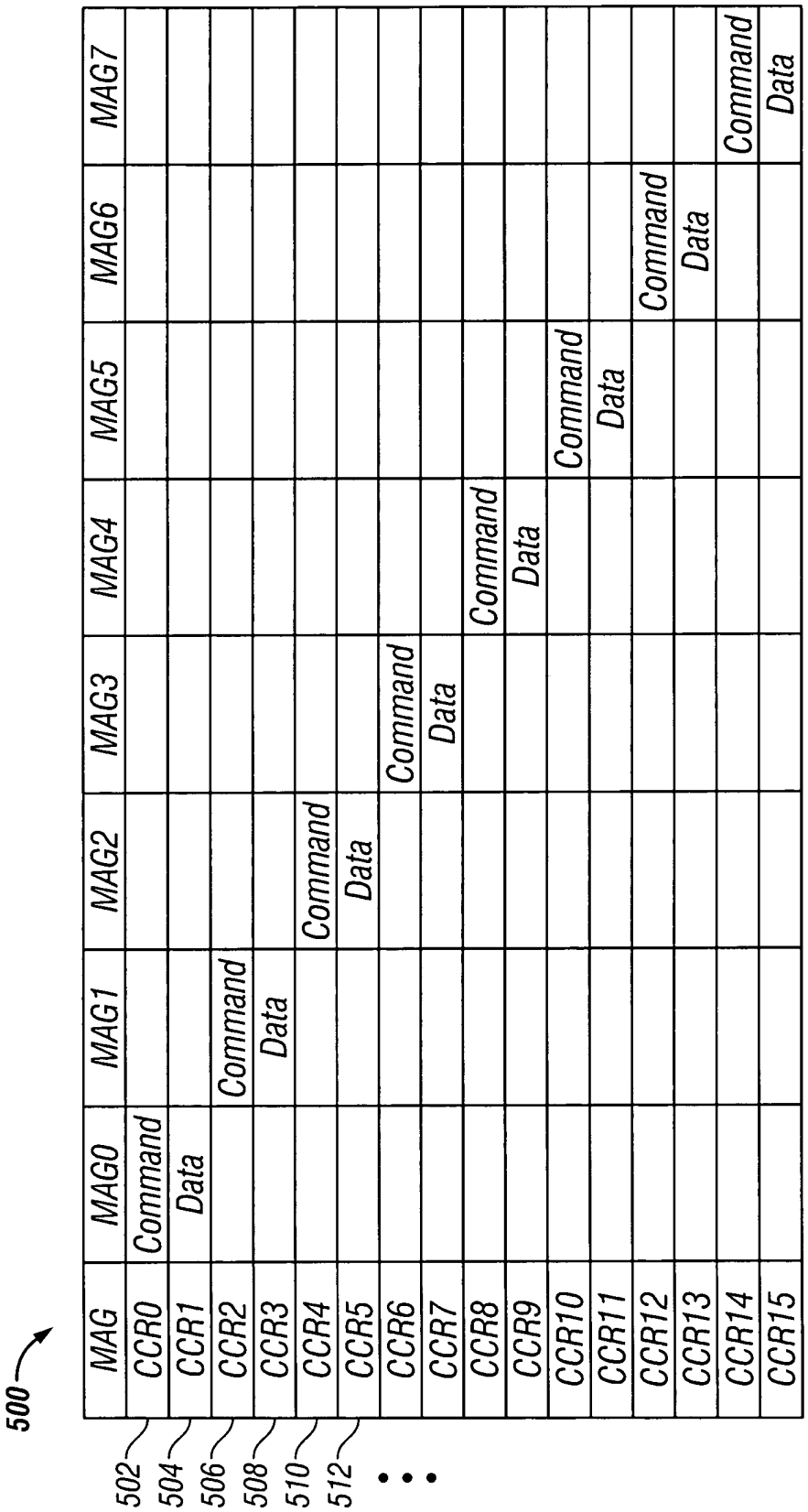
500
MAG
MAG0
MAG1
MAG2
MAG3
MAG4
MAG5
MAG6
MAG7
CCR0
CCR1
CCR2
CCR3
CCR4
CCR5
CCR6
CCR7
CCR8
CCR9
CCR10
CCR11
CCR12
CCR13
CCR14
CCR15
Command
Data
Command
Data
Command
Data
Command
Data
Command
Data
Command
Data
Command
Data
502
504
506
508
510
512

FIG. 5

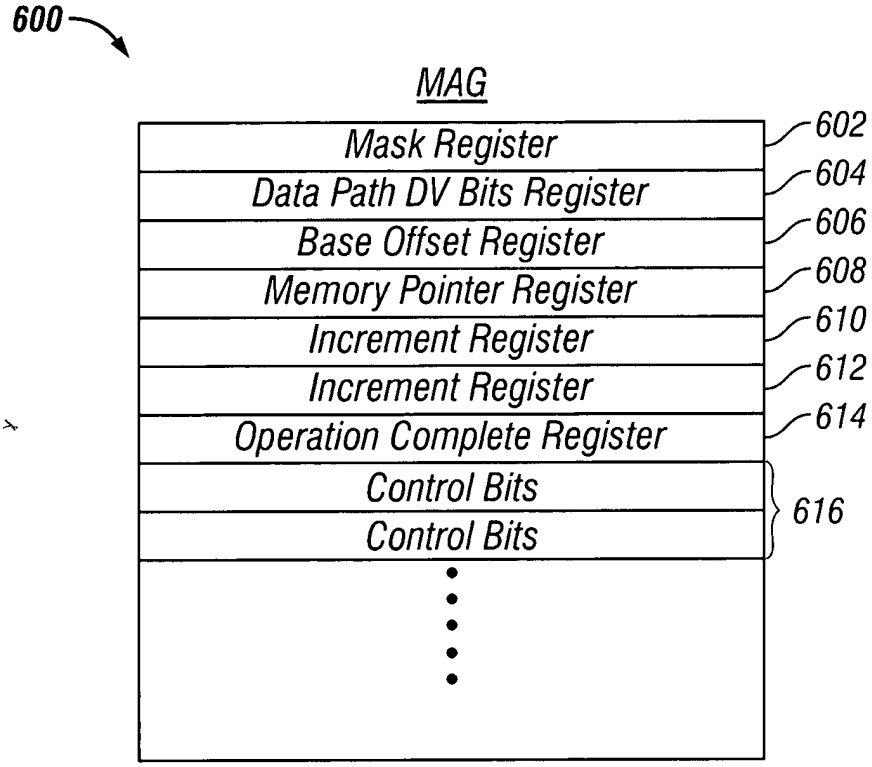

FIG. 6

800

802

15	14	13	12	11	10	9	8-0	
0	0	X	X	X	X	X	X	Read Immediate
1	0	X	X	X	X	X	X	Write Immediate
0	1	0	X	X	X	X	X	Read Indirect
0	1	1	X	X	X	X	X	Write Indirect
1	1	0	1	X	X	X	X	Write Increment Registers
1	1	0	0	0	X	X	X	Set Data Path
1	1	0	0	1	0	0	X	Set Read Operation Complete
1	1	1	0	0	X	X	X	Write Memory Pointer Register
1	1	1	0	1	X	X	X	Write Base Offset
1	1	1	1	0	X	X	X	Write Mask Register
1	1	1	1	1	X	X	X	Write First Use Register

FIG. 8

700

	MCH Command	Description
702	Write Mask	Used in address calculations to create circular buffer addressing
704	Set Data Path DV Bits	Determines the target PE(s) for the read data
706	Read Immediate	Reads RAM from a specified address
708	Write Immediate	Writes RAM from the Data CCR to a specified RAM address
710	Write MPR	An initial offset value to be used in address calculations
712	Write Increment Register	Provides X and Y increment values for one or 2D addressing
714	Write Base Offset Register	Sets the Base Offset Register used in addressing
716	Read Indirect N Words	Reads N words into the Data CCR using the MAG Memory Pointer
718	Write Indirect N Words	Writes N words from the Data CCR using the MAG Memory Pointer
720	Read OP Complete	Used to signal the MCH control PE that a block transfer is complete
722	Infinite Indirect Operation	Set infinite indirect MCH operation

FIG. 7